

WHAT IS CLAIMED IS:

1. A modular pultrusion die comprising the following elements a-f communicating with each other in the order listed:
  - a) a fiber preheat station section containing inlets for the passage of fiber bundles;
  - b) a fiber infeed section;
  - c) a resin infeed and impregnation section;
  - d) a reduction section;
  - e) a shaping and consolidation section that supports one or more removable and replaceable consolidation inserts; and
  - f) a cooling section that supports one or more removable and replaceable consolidation inserts.
2. The modular pultrusion die of Claim 1 which includes a removable and replaceable mandrel contained in the reduction section.
3. The modular pultrusion die of Claim 1 wherein the removable and replaceable consolidation inserts are split inserts.
4. The modular pultrusion die of Claim 3 wherein the removable and replaceable cooling inserts are split inserts.
5. The modular pultrusion die of Claim 1 wherein the glass infeed section includes one or more removable and replaceable inserts.
6. A modular pultrusion die comprising the following elements a-f communicating with each other in the order listed:
  - a) a fiber preheat station section containing inlets for the passage of fiber bundles;

- b) a fiber infeed section that supports one or more removable and replaceable fiber infeed inserts;
  - c) an resin infeed and impregnation section;
  - d) a reduction section;
  - 5 e) a shaping and consolidation section; and
  - f) a cooling section.
7. A process of changing profiles in a modular pultrusion die comprising the steps of:
- 10 e) pultruding fiber through a pultrusion die containing any or all of the following removable and replaceable inserts: i) one or more consolidation inserts ii) one or more cooling inserts; and iii) one or more fiber infeed inserts;
  - f) stopping the pultruding of fiber;
  - 15 g) removing any or all of the inserts and replacing the removed inserts with other inserts; and
  - h) restarting the pultrusion process.
8. The process of Claim 7 wherein the consolidation and cooling inserts are removed and replaced with other consolidation and cooling inserts.
9. The process of Claim 7 wherein the fiber infeed inserts are removed and replaced with other fiber infeed inserts.
- 20